

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Amendments to the Claims:

Please add claims 44-48.

1 (withdrawn). A plant comprising a recombinant nucleotide sequence integrated into the plant genome, the sequence encoding an amino acid sequence which, when orally administered to a fish, results in ~~an antigenic or immunogenic~~ a protective response in said fish.

2. (withdrawn) A plant seed comprising a recombinant nucleotide sequence integrated into the plant seed genome, the sequence encoding an amino acid sequence which, when administered to a fish, results in ~~an antigenic or immunogenic~~ a protective response in said fish.

3. (withdrawn) A plant cell comprising a recombinant nucleotide sequence integrated into the plant cell genome, the sequence encoding an amino acid sequence which, when administered to a fish, results in ~~an antigenic or immunogenic~~ a protective response in said fish .

4.(withdrawn) The plant of claim 1 wherein the amino acid sequence is an antigen of an organism that causes disease or pathology in a fish.

5. (withdrawn) ~~The plant of claim 1~~ A plant comprising a recombinant nucleotide sequence integrated into the plant genome, the sequence encoding an amino acid sequence which, when orally administered to a fish, results in a protective response in said fish, wherein the nucleotide sequence comprises SEQ ID NO: 5.

6. (withdrawn) A composition for administration to a fish, comprising plant material comprising a recombinant nucleotide sequence integrated into the genome of the plant material, the sequence encoding an amino acid sequence which, when administered to a fish, results in ~~an antigenic or immunogenic~~ a protective response in said fish.

7. (withdrawn) The composition of claim 6 wherein the plant material comprises seed tissue comprising the recombinant nucleotide sequence.

8. (withdrawn) The composition of claim 6 wherein the plant material is combined with at least one nutrient or excipient.
9. (withdrawn) The composition of claim 6 wherein the amino acid sequence is an antigen of an organism that causes disease or pathology in fish.
10. (withdrawn) ~~The composition of Claim 9~~ A composition for administration to a fish, comprising plant material comprising a recombinant nucleotide sequence integrated into the genome of the plant material, the sequence encoding an amino acid sequence that is an antigen of an organism that causes disease or pathology in fish, which, when administered to a fish, results in a protective response in said fish, wherein the nucleotide sequence comprises SEQ ID NO: 5.
11. – 23 (cancelled)
24. (withdrawn) The plant of claim 1, wherein the plant is a monocotyledonous plant.
25. (withdrawn) The plant of claim 1, wherein the plant is corn.
26. (withdrawn) The plant of claim 1, wherein the plant is a dicotyledonous plant.
27. (withdrawn) The plant of claim 1, wherein the amino acid is expressed in the plant at levels of at least about 0.01% total soluble protein.
28. (withdrawn) The plant of claim 1, wherein the amino acid is expressed in the plant at levels of at least about 0.1% total soluble protein.
29. (withdrawn) The plant cell of claim 3, wherein the cell is a monocotyledonous plant cell.
30. (withdrawn) The plant cell of claim 3, wherein the cell is a corn cell.
31. (withdrawn) The plant cell of claim 3, wherein the cell is a dicotyledonous plant cell.
32. (withdrawn) The plant cell of claim 3 further comprising a second nucleotide sequence which causes the amino acid to be secreted to the cell wall.
33. (currently amended) A method of protecting a fish from disease or pathology comprising orally administering to the fish a composition comprising plant material comprising a recombinant nucleotide sequence integrated into the genome of the plant material, the sequence encoding an amino acid sequence which protects the fish from disease or pathology.

34. (previously presented) The method of claim 33 wherein the amino acid is expressed at levels of at least about 0.01% total soluble protein.

35. (previously presented) The method of claim 33 wherein the amino acid is expressed at levels of at least about 0.1% total soluble protein.

36. (previously presented) A method of protecting a fish from disease or pathology comprising

(a) transforming plant tissue with a nucleotide sequence encoding an amino acid sequence, which, when administered to a fish protects the fish from disease or pathology;

(b) feeding the plant tissue comprising the nucleotide sequence to said fish, such that the fish is protected from disease or pathology

37. (previously presented) The method of claim 36 wherein the nucleotide sequence encodes an amino acid protecting the fish from infectious pancreatic necrosis virus.

38. (previously presented) The method of claim 36 wherein the amino acid sequence is expressed at levels of at least about 0.01% total soluble protein.

39. (previously presented) The method of claim 35 wherein the amino acid sequence is expressed at levels of at least about 0.1% total soluble protein.

40. (withdrawn) The composition of claim 6 wherein the amino acid is expressed at levels of at least about 0.01% total soluble protein.

41. (withdrawn) The composition of claim 6 wherein the amino acid is expressed at levels of at least about 0.1% total soluble protein.

42. (previously presented) A method of protecting a fish from disease or pathology comprising

(a) transforming plant tissue with a nucleotide sequence encoding an amino acid sequence which, when administered to a fish protects the fish from disease or pathology;

(b) expressing the amino acid sequence at levels in the plant tissue of at least about 0.01% total soluble protein;

(c) feeding the plant tissue comprising the nucleotide sequence to said fish such that the fish is protected from disease or pathology.

43 (previously presented) The method of claim 42 wherein the amino acid sequence is expressed at levels of at least about 0.1% total soluble protein.

44. (new) The method of claim 42, wherein the amino acid sequence is an antigen from infectious pancreatic necrosis virus.

45. (new) The method of claim 42, wherein the amino acid sequence is selected from the group consisting of VP2 or VP3.

46. (new) The method of claim 42, wherein the sequence encodes VP2 and VP3 and is expressed in the plant at levels of at least about 0.1% total soluble protein.

47. (new) The method of claim 42 wherein the sequence comprises SEQ ID NO: 5.

48. (new) A method of protecting a fish from disease or pathology comprising transforming plant tissue with a nucleotide sequence encoding an amino acid sequence which, when administered to a fish protects the fish from disease or pathology and orally administering the plant tissue comprising the nucleotide sequence to said fish such that the fish is protected from disease or pathology.